SiSiB® STP92600 Silane Terminated Polyether Polymer

BACKGROUND

Polyurethane sealants offer good mechanical strength and are paintable but often contain solvents and have limited weather resistance. Silicone sealants provide excellent aging resistance, flexibility, and thermal stability but cannot be painted and may cause staining on absorbent surfaces.

Silane terminated polyether polymers (STP), also known as silane-modified polymers or MS polymers, combine the advantages of polyurethane and silicone without their weakness.

STP-based formulations are solvent-free and isocyanate-free, curing without bubble formation or odor release, and exhibit low VOC emissions with excellent paintability.

INTRODUCTION

SiSiB® STP92600 is a silyl-terminated polyether (STP) polymer designed as a base polymer in moisture-curing, medium to high modulus adhesives, sealants, and coatings. When exposed to atmospheric moisture, it reacts through hydrolysis and crosslinking to create highly durable elastomeric materials.

SiSiB® STP92600 offers a balanced combination of durability, reactivity, and storage stability. Adhesives and sealants formulated with this polymer exhibit broad adhesion, good mechanical strength, and deliver excellent flexibility, weather resistance, and environmentally friendly curing performance.

FEATURES & BENEFITS

- Medium to high modulus with low viscosity
- Fast moisture curing and bubble-free performance
- Excellent adhesion to a wide range of substrates
- High elastic recovery and flexibility
- Superior UV, weathering, and chemical resistance
- Solvent-free, isocyanate-free, tin-free
- Low VOC and odorless curing
- Suitable for both one- and two-component formulations

PHYSICAL PROPERTIES

Appearance	Light yellow clear liquid
Boiling point	>250°C
Density 25°C	1.00

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Viscosity (25°C, mPa·s)	6,000-9,000
Flash point	>237°C
Water solubility/miscibility	Virtually insoluble

Note: These values are typical and not intended for specification purposes.

APPLICATIONS

Construction: Facade joints, window and door sealing, curtain wall panels, roof expansion joints
Automotive: Body seams, glass installation, interior trim bonding
Electronics: Joint sealing, moisture protection, thermal adhesive bonding
DIY & Consumer: Kitchen & bathroom sealing, flooring joints, tile grouting
Marine: Long-lasting, weather-resistant sealing for marine structures, boats, and ships

PROCESSING

SiSiB® STP92600 silyl terminated polyether readily dissolves in standard organic solvents but is virtually insoluble in water. Despite its highly reactive terminal groups, uncatalyzed SiSiB® STP92600 remains stable in air for several days. However, its reactivity with water or atmospheric humidity must be considered during storage and processing, as exposure may lead to slow condensation.

SiSiB® STP92600 silyl terminated polyether can be processed using both hot and cold methods, and are suitable for both one component and two-component formulations. To prevent premature curing during formulation or exposure to moisture during storage, the addition of a water scavenger is recommended, SiSiB® PC6110 (vinyltrimethoxysilane) is commonly used.

PACKING

SiSiB® STP92600 is available in 200Kg steel drum and 1000Kg IBC tote.

STORAGE

SiSiB® STP92600 has a shelf life of 12 months from the date of manufacture when stored in original, unopened containers at 4-30°C. After opening, containers must be tightly resealed to prevent contamination and moisture ingress.

HANDLING

This document does not contain the product safety information required for safe use. Before handling, please refer to the product and safety data

sheets, as well as container labels, for information on safe usage, physical hazards, and health risks. Safety Data Sheet is available on the website, from the distributor, or by contacting SiSiB customer service.

NOTE

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

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APPENDIX: UNDERSTANDING SEALANT MODULUS

Modulus	Key Characteristics	Typical Applications
Low	• High flexibility • Accommodates significant joint movement • Exerts low stress on substrates	• Facade joints • Curtain walls • Glazing applications • Expansion joints in concrete structures • Areas with significant thermal or structural movement
Medium	• Balanced flexibility and strength • Suitable for general-purpose sealing • Moderate stress on substrates	• Perimeter sealing of windows and doors • Control joints in masonry • Precast concrete panel joints • General construction applications
High	• High strength and rigidity • Limited flexibility • Exerts higher stress on substrates	• Structural glazing • Non-moving joints • Industrial applications requiring high strength • Areas where joint movement is minimal